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Russel McDonald

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ROPES & GRAY LLP

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EXAMINER

HUERTA, ALEXANDER Q

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/644,350	<b>Applicant(s)</b> MCDONALD, RUSSEL	
	<b>Examiner</b> ALEXANDER Q. HUERTA	<b>Art Unit</b> 2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 April 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-10 and 12-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments filed April 23, 2008 have been fully considered but they are not persuasive.

On page 8 of Applicant's Response, applicant argues that Herley does not disclose identifying repeating segments and classifying said identified repeating segments based on their duration.

The Examiner respectfully disagrees with Applicant's arguments, because Herley discloses that for example a given audio stream, the system will automatically identify repeating media objects (segments) in a media stream. Based on the comparison of the endpoints (i.e. duration) of the media objects a match can be made to distinguish between songs, jingles, advertisements, and thus classifying the segments [0015]. Therefore, the reference is believed to read on the claimed "identifying repeating segments of said broadcast program signal, and classifying said identified repeating segments based on their duration".

Applicant's arguments with respect to claim 7 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Objections***

**Claim 5** is objected to because of the following informalities: Claim 5 depends from cancelled claim 4. For examination purposes, the Examiner assumes claim 5 depends from claim 1. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Claims 1-3, 5-6, 12-13** are rejected under 35 U.S.C. 102(e) as being anticipated by Herley (United States Patent Application Publication 2003/0231868), herein referenced as Herley.

Regarding **claim 1**, Herley discloses a system and method for identifying and segmenting repeating media objects embedded in a stream. In addition, Herley discloses “receiving said broadcast program signal from an external source, recording said broadcast program signal as received in a storage device”, as disclosed in paragraph [0024] and further exhibited in figure 1 elements (140,150). In addition, Herley further discloses “identifying repeating segments of said broadcast program signal”, as disclosed in paragraph [0010]; “classifying said identified repeating segments based on their duration” ([0010], [0015], i.e. Herley discloses that the system will identify repeating objects in a media stream based on their endpoints (duration) to classify jingles, advertisements, songs, etc.).

Regarding **claim 2**, Herley discloses everything as claimed above (see claim 1). In addition, Herley discloses “the step of comparing a portion of said broadcast program signal with previously received and recorded portions of said broadcast program signal”, as disclosed in paragraph [0006].

Regarding **claim 3**, Herley discloses everything as claimed above (see claim 1). In addition, Herley discloses “the step of storing bookmarking information which identifies the location of at least one of said repeating segments in said storage device”, as disclosed in paragraph [0083].

Regarding **claim 5**, Herley discloses everything as claimed above (see claim 1). In addition, Herley discloses “determining whether said duration is greater than or less than a predetermined elapsed time duration”, as disclosed in paragraph [0102].

Regarding **claim 6**, Herley discloses everything as claimed above (see claim 5). In addition, Herley discloses that “wherein repeating segments having a duration greater than said predetermined elapsed time duration are classified as music recordings”, as disclosed in paragraph [0102].

Regarding **claim 12**, Herley discloses that “processing said broadcast programming to create a sequence of identification values indicative of the content of a corresponding sequence of intervals of said broadcast programming”, as disclosed in paragraph [0013]. In addition, Herley further discloses “searching said sequence of identification values for substantially matching patterns of values indicative of repeating content”, as disclosed in paragraph [0014].

Regarding **claim 13**, Herley discloses everything as claimed above (see claim 12). In addition, Herley discloses that “said step of processing said broadcast programming to create a sequence of identification values employs a wavelet transform”, as disclosed in paragraph [0068].

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 7-10, 15-16, 18-19, 21-23, 25-26** are rejected under 35 U.S.C. 103(a) as being unpatentable over Herley in view of Boreczky et al. (United States Patent 6,366,296), herein referenced as Boreczky.

Regarding **claim 7**, Herley discloses “recording said broadcast programming on a signal storage device”, as disclosed in paragraph [0024] and further exhibited in figure 1 elements (140,150). Herley further discloses “searching said broadcast programming for matching program segments that substantially duplicate one another”, as disclosed in paragraph [0006]. In addition, Herley discloses “storing... information specifying the location of at least one of said matching program segments...”, as disclosed in paragraphs [0083], [0117], [0187].

Herley fails to explicitly disclose "bookmarking information, wherein the bookmarking information is employed to enable a user to select and play back desired segments of the at least one of said matching program segments".

Boreczky discloses "bookmarking information (metadata), wherein the bookmarking information is employed to enable a user to select and play back desired segments..." [Col. 2 lines 4-16, Col. 3 line 56-Col. 4 line 9]. Thus, it would have been obvious to one of ordinary skill in the art to apply the technique of using metadata to label desired media segments as taught by Boreczky, to improve the repeating segment identifier system of Herley for the predictable result of enabling a user to retrieve desired media segments at their convenience for playback.

Regarding **claim 8**, Herley discloses everything as claimed above (see claim 7). In addition, Herley discloses that "said information specifying the location of at least one of said matching program segments contains data indicating the duration of said matching program segments", as disclosed in paragraph [0019].

Regarding **claim 9**, Herley discloses everything as claimed above (see claim 7). In addition, Herley discloses "extracting a series of fingerprint data values from said broadcast programming, each of said fingerprint data values being indicative of predetermined characteristics of particular segment of said broadcasting programming, storing said fingerprint values in an addressable memory device", as disclosed in paragraph [0019]. Herley further discloses "searching for matching sequences of fingerprint values", as disclosed in paragraph [0020].

Regarding **claim 10**, Herley discloses everything as claimed above (see claim 9). In addition, Herley discloses that “said substep of searching for matching sequences of fingerprint values comprises creating a sorted index to sequences of said fingerprint values and employing said sorted index to locate matching sequences of index values”, as disclosed in paragraph [0116].

Regarding **claim 15**, Herley discloses “employing a wavelet transform to extract first sequence of wavelet coefficient values from said pre-recorded program signal, employing said wavelet transform to extract a second sequence of wavelet coefficient values from said source program signal”, as disclosed in paragraphs [0004] and [0019] respectively.

Herley discloses “searching said second sequence for the values substantially matching at least a portion of said first sequence of wavelet coefficient values”, as disclosed in paragraph [0018], and “storing... information specifying the location of an identified pre-recorded program segment...”, as disclosed in paragraphs [0083], [0117], [0187].

Herley fails to explicitly disclose “bookmarking information, wherein the bookmarking information is employed to enable a user and play back desired segments of the at least one of said matching program segments”.

Boreczky discloses “bookmarking information (metadata), wherein the bookmarking information is employed to enable a user to select and play back desired segments...” [Col. 2 lines 4-16, Col. 3 line 56-Col. 4 line 9]. Thus, it would have been obvious to one of ordinary skill in the art to apply the technique of using metadata to



label desired media segments as taught by Boreczky, to improve the repeating segment identifier system of Herley for the predictable result of enabling a user to retrieve desired media segments at their convenience for playback.

Regarding **claim 16**, Herley discloses everything as claimed above (see claim 15). In addition, Herley discloses “converting said first sequence of wavelet coefficients into at least two identification fingerprint values characterizing the beginning and ending of said pre-recorded program segment”, as disclosed in paragraph [0015] and further exhibited in figure 3B step 360. Herley further discloses “converting said second sequence of wavelet coefficient values into a succession of fingerprint values characterizing successive samples of said source program signal, and searching said succession of fingerprint values for said identification fingerprint values”, as disclosed in paragraphs [0019] and [0070] respectively.

Regarding **claim 18**, Herley discloses everything above (see claim 16). In addition, Herley discloses that “said first sequence of wavelet coefficient values is extracted from different portion of said pre-recorded program signal”, as disclosed in paragraph [0021].

Regarding **claim 19**, Herley fails to explicitly disclose that “the bookmarking information is employed to enable the user to skip from a current matching program segment to at least one of a next matching program segment and a previous matching program segment”.

Boreczky discloses that “the bookmarking information is employed to enable the user to skip from a current matching program segment to at least one of a next

matching program segment and a previous matching program segment" [Col. 5 lines 39-55, Fig. 1]. Thus, it would have been obvious to one of ordinary skill in the art to apply the technique of using metadata to enable a user to skip from a current program segment to the next program segment as taught by Boreczky, to improve the repeating segment identifier system of Herley for the predictable result of enabling a user the convenience of "jumping" to matching program segments without having to fast-forward/rewind through undesirable program segments.

Regarding **claim 21**, Herley fails to explicitly disclose that "the bookmarking information comprises data that describes contents of the at least of said matching program segments, said data being displayed to the user to facilitate selection and playback of desired segments of the at least one of said matching program segments".

Boreczky discloses that "the bookmarking information comprises data that describes contents of the at least of said matching program segments, said data being displayed to the user to facilitate selection and playback of desired segments of the at least one of said matching program segments" [Col. 4 line 61- Col. 5 line 6, Fig. 1 El. 4]. Thus, it would have been obvious to one of ordinary skill in the art to apply the technique of using metadata to enable a user to playback desired program segments as taught by Boreczky, to improve the repeating segment identifier system of Herley for the predictable result of enabling a user the convenience of "jumping" to matching program segments without having to fast-forward/rewind through undesirable program segments.

Regarding **claim 22**, Herley fails to explicitly disclose that "said data comprises at least of one of a title corresponding to contents of a program segment, a performer

corresponding to contents of a program segment, a source of a program segment, and a classification type of a program segment".

Boreczky discloses that "said data comprises at least of one of a **title corresponding to contents of a program segment**, a performer corresponding to contents of a program segment, a source of a program segment, and a classification type of a program segment" [Col. 4 line 61- Col. 5 line 6, Fig. 1 El. 4]. Thus, it would have been obvious to one of ordinary skill in the art to apply the technique of using metadata to identify program segments as taught by Boreczky, to improve the repeating segment identifier system of Herley for the predictable result of enabling a user the convenience of selecting desired program segments.

Regarding **claims 23, 25-26**, claims 23, 25-26 are interpreted and thus rejected for the reasons set forth above in the rejection of claims 19, 21-22, respectively. Claims 19, 21-22 describe a method for identifying recordings in broadcast programming and claims 23, 25-26 describe a method for identifying the presence of a pre-recorded program segment in a source program signal. Thus, claims 23, 25-26 are rejected.

**Claim 14** is rejected under 35 U.S.C. 103(a) as being unpatentable over Herley in view of Ward et al. (United States Patent Application Publication 2002/0133499), herein referenced as Ward.

Regarding **claim 14**, Herley discloses everything as claimed above (see claim 12). However, Herley fails to disclose "processing different portions of said signal using wavelet transform to generate a plurality of different wavelet coefficients, and combining

predetermined groups of said wavelet coefficients to create said sequence of identification values”.

Ward discloses a system and method for acoustic fingerprinting. In addition, Ward discloses “processing different portions of said signal using wavelet transform to generate a plurality of different wavelet coefficients, and combining predetermined groups of said wavelet coefficients to create said sequence of identification values”, as disclosed in paragraph [0035] and further exhibited in figure 2.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Herley by specifically providing processing different portions of said signal using wavelet transform to generate a plurality of different wavelet coefficients, and combining predetermined groups of said wavelet coefficients to create said sequence of identification values, as taught by Ward for the purpose of representing functions that have may have discontinuities.

**Claim 17** is rejected under 35 U.S.C. 103(a) as being unpatentable over Herley in view of Boreczky, and in further view of Ward.

Regarding **claim 17**, Herley discloses everything as claimed above (see claim 16). However, Herley fails to disclose “each of said fingerprint values comprises a binary word in which selected bits represent corresponding ones of said wavelet coefficients”.

Ward discloses that “each of said fingerprint values comprises a binary word in which selected bits represent corresponding ones of said wavelet coefficients” ([0039], i.e. one of ordinary skill in the art would recognize that the binary word is a unique

identifier). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Herley by specifically providing each of said fingerprint values comprises a binary word in which selected bits represent corresponding ones of said wavelet coefficients, as taught by Ward for the purpose of efficiently looking up stored fingerprint values.

**Claims 20, 24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Herley, in view of Boreczky, and in further view of Logan et al. (United States Patent Application Publication 2003/0093790), herein referenced as Logan.

Regarding **claim 20**, Herley discloses that the identification of program segments can be used for the purposes of a playlist [0007], but does not explicitly disclose that “the bookmarking information is employed to enable the user to form a playlist of matching program segments, for allowing playback of segments of the playlist, in an order specified by the playlist, in the absence of an intervening command by the user”.

Logan discloses that “the bookmarking information is enabling the user to form a playlist of ...program segments, for allowing playback of segments of the playlist, in an order specified by the playlist, in the absence of an intervening command by the user” ([0007], [0008]). Thus, it would have been obvious to one of ordinary skill in the art to apply the technique of using a playlist for the playback of program segments as taught by Logan, to improve the repeating segment identifier system of Herley for the predictable result of enabling a user playback a series of program segments without having to individually select each program segment for playback.

Regarding **claim 24**, claim 24 is interpreted and thus rejected for the reasons set forth above in the rejection of claim 20. Claim 20 describes a method for identifying recordings in broadcast programming and claim 24 describes a method for identifying the presence of a pre-recorded program segment in a source program signal. Thus, claim 24 is rejected.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALEXANDER Q. HUERTA whose telephone number is (571) 270-3582. The examiner can normally be reached on M-F(Alternate Fridays Off) 7:30-5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Beliveau can be reached on (571) 272-7343. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Alexander Q Huerta  
Examiner  
Art Unit 2623

July 23, 2008

/Scott Beliveau/  
Supervisory Patent Examiner, Art Unit 2623